CLAIMS

What is claimed is:

1. A method of forming a system for sterilizing air comprising:

providing a duct for flowing the air therethrough; and

positioning a first electron beam generator relative to the duct for irradiating the air flowing therethrough with a first electron beam, the first electron beam for disabling microorganisms within the air.

2. The method of Claim 1 further comprising forming the system in an air circulation system.

3. The method of Claim 1 further comprising positioning a converter within the duct downstream from the first electron beam generator for converting ozone within the air into oxygen.

4. The method of Claim 1 further comprising positioning a second electron beam generator relative to the duct opposite to the first electron beam generator for irradiating the air flowing through the duct with a second electron beam.

5. The method of Claim 1 further comprising forming a reflector in the duct opposite to the first electron beam generator for reflecting the first electron beam.

6. The method of Claim 1 further comprising forming two right angle turns in the duct on opposite sides of the first electron beam generator for providing shielding from radiation.

7. The method of Claim 6 further comprising collimating the duct.

8. The method of Claim 1 further comprising positioning an air circulator in relation to the duct for causing the air to flow therethrough.

9. A method of forming an air circulation system comprising:

providing a duct for flowing air therethrough; and

positioning a first electron beam generator relative to the duct for irradiating the air flowing therethrough with a first electron beam, the first electron beam for disabling microorganisms within the air to sterilize the air.

10. The method of Claim 9 further comprising positioning the duct relative to an enclosed volume for providing sterilized air within the environment.

11. The method of Claim 9 further comprising positioning a converter within the duct downstream from the first electron beam generator for converting ozone within the air into oxygen.

12. The method of Claim 9 further comprising positioning a second electron beam generator relative to the duct opposite to the first electron beam generator for irradiating the air flowing through the duct with a second electron beam.

13. The method of Claim 9 further comprising forming a reflector in the duct opposite to the first electron beam generator for reflecting the first electron beam.

14. A method of sterilizing air comprising:

flowing the air through a duct; and

irradiating the air flowing through the duct with a first electron beam from a first electron beam generator, the first electron beam disabling microorganisms within the air.

15. The method of Claim 14 further comprising sterilizing the air within an air circulation system.

16. The method of Claim 14 further comprising converting ozone within the air into oxygen with a converter positioned within the duct downstream from the first electron beam generator.

17. The method of Claim 14 further comprising irradiating the air flowing through the duct with a second electron beam from a second electron beam generator positioned opposite to the first electron beam generator.

18. The method of Claim 14 further comprising reflecting the electron beam with a reflector in the duct opposite to the first electron beam generator.

19. The method of Claim 14 further comprising providing shielding from radiation by forming two right angled turns in the duct on opposite sides of the first electron beam generator.

20. The method of Claim 14 further comprising causing the air to flow through the duct with an air circulator.

21. A method of sterilizing air in an air circulation system comprising:

flowing the air through a duct of the air circulation system; and

irradiating the air flowing through the duct with a first electron beam from a first electron beam generator, the first electron beam disabling microorganisms within the air.

22. The method of Claim 21 further comprising positioning the duct relative to an enclosed volume for providing sterilized air within the volume.

23. The method of Claim 21 further comprising converting ozone within the air into oxygen with a converter positioned within the duct downstream from the first electron beam generator.

24. The method of Claim 21 further comprising irradiating the air flowing through the duct with a second electron beam from a second electron beam generator positioned opposite to the first electron beam generator.

25. The method of Claim 21 further comprising reflecting the electron beam with a reflector in the duct opposite to the first electron beam generator.

26. A method of sterilizing air comprising:

flowing the air through a duct; and

irradiating the air flowing through the duct with opposed first and second electron beams from first and second electron beam generators for disabling microorganisms in the air, the first and second electron beam generators being positioned relative to the duct opposite from each other.

27. A method of sterilizing air comprising:

directing an electron beam into a sterilization chamber; and

directing the air into the sterilization chamber generally against the direction of the electron beam and redirecting the air generally along the

direction of the electron beam for irradiating the air and disabling microorganisms in the air.